FIG. 1

FIG. 2A

FIG. 2B

START

301 — RECEIVE INCOMING PACKET

302 — READ PACKET HEADER
AND RETRIEVE
PACKET FILTERING RULES

303 — SOURCE ADDRESS
MATCHES ADDRESSES
ASSOCIATED WITH
PROVIDER 1?

—YES→ 304
ROUTE PACKET TO
ROUTER IN PROVIDER 1
NETWORK

NO

305 — SOURCE ADDRESS
MATCHES ADDRESSES
ASSOCIATED WITH
PROVIDER 2?

—YES→ ROUTE PACKET TO
ROUTER IN PROVIDER 2
NETWORK

306

NO

307 — APPLY REMAINING
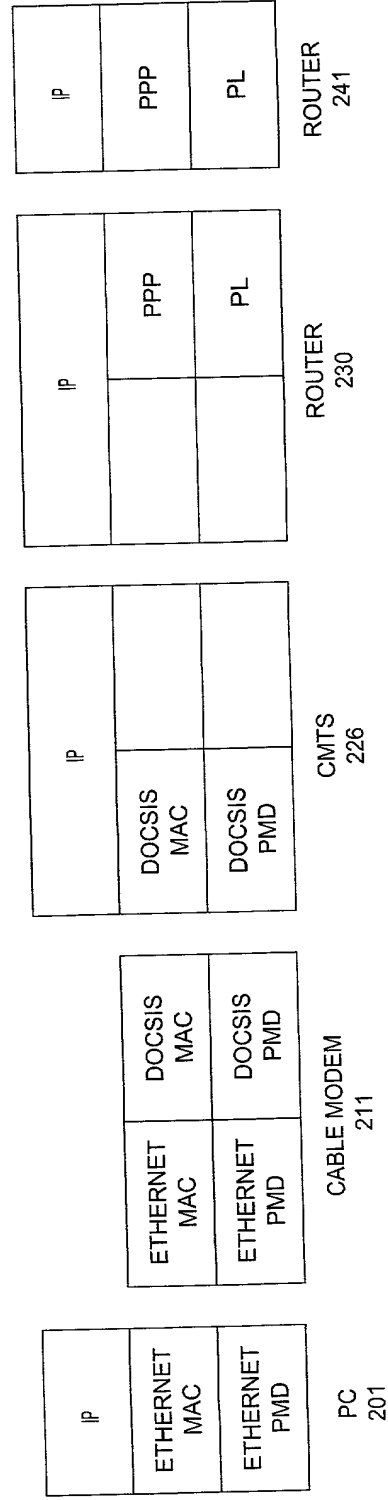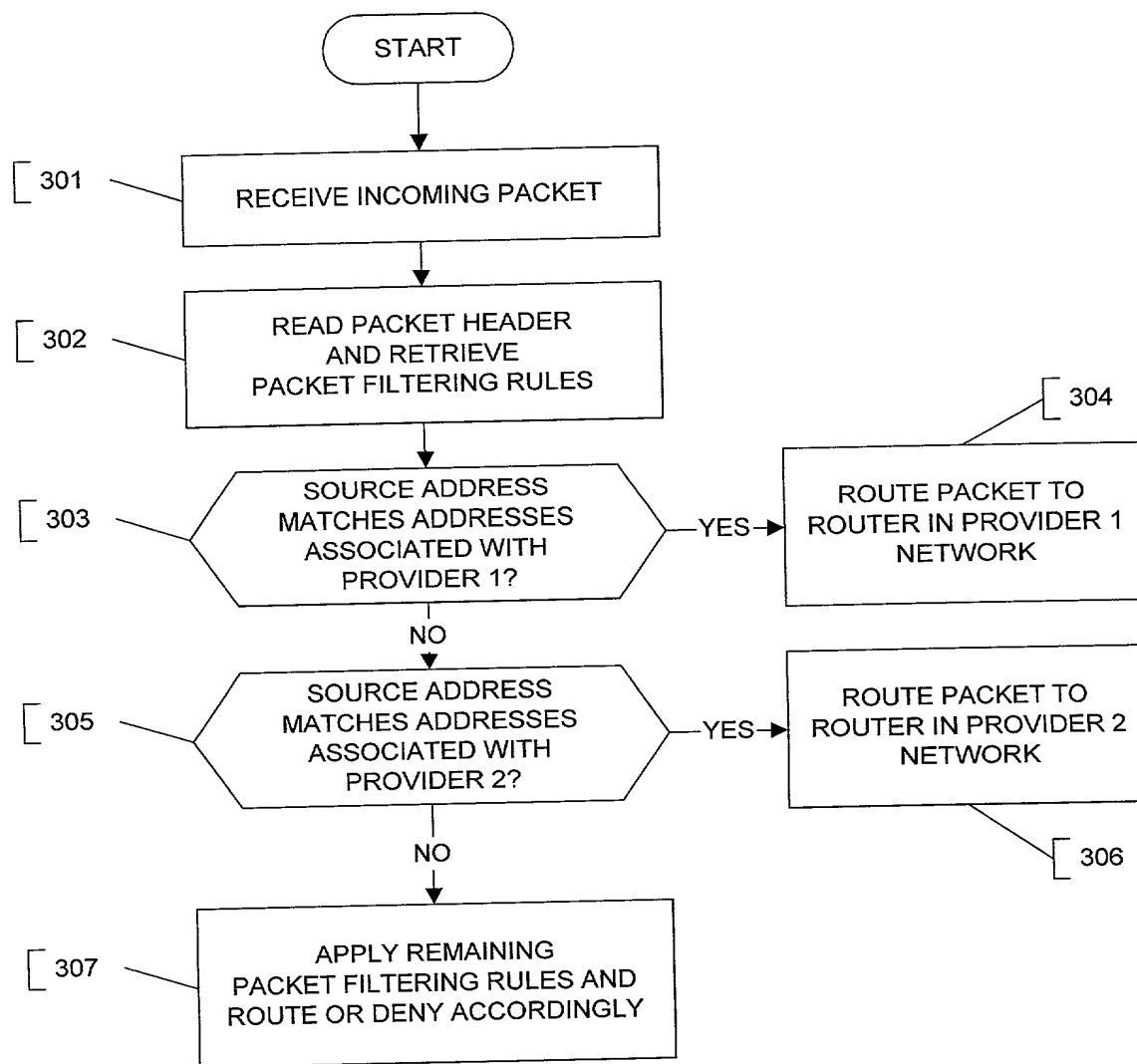PACKET FILTERING RULES AND
ROUTE OR DENY ACCORDINGLY

FIG. 3

```
401   interface cable x/y
402   ...
403   ip policy route-map source_route
404   ...
405   !

406   route-map source_route
407   match ip address isp1_subs
408   set ip next-hop isp1_next-hop_address
409   match ip address isp2_subs
410   set ip next-hop isp2_next-hop_address
411   ...
412   access-list isp1_subs permit isp1_prefix1
isp1_prefix1_wildcard any any
413   access-list isp1_subs permit isp1_prefix2
isp1_prefix2_wildcard any any
414   ...
```
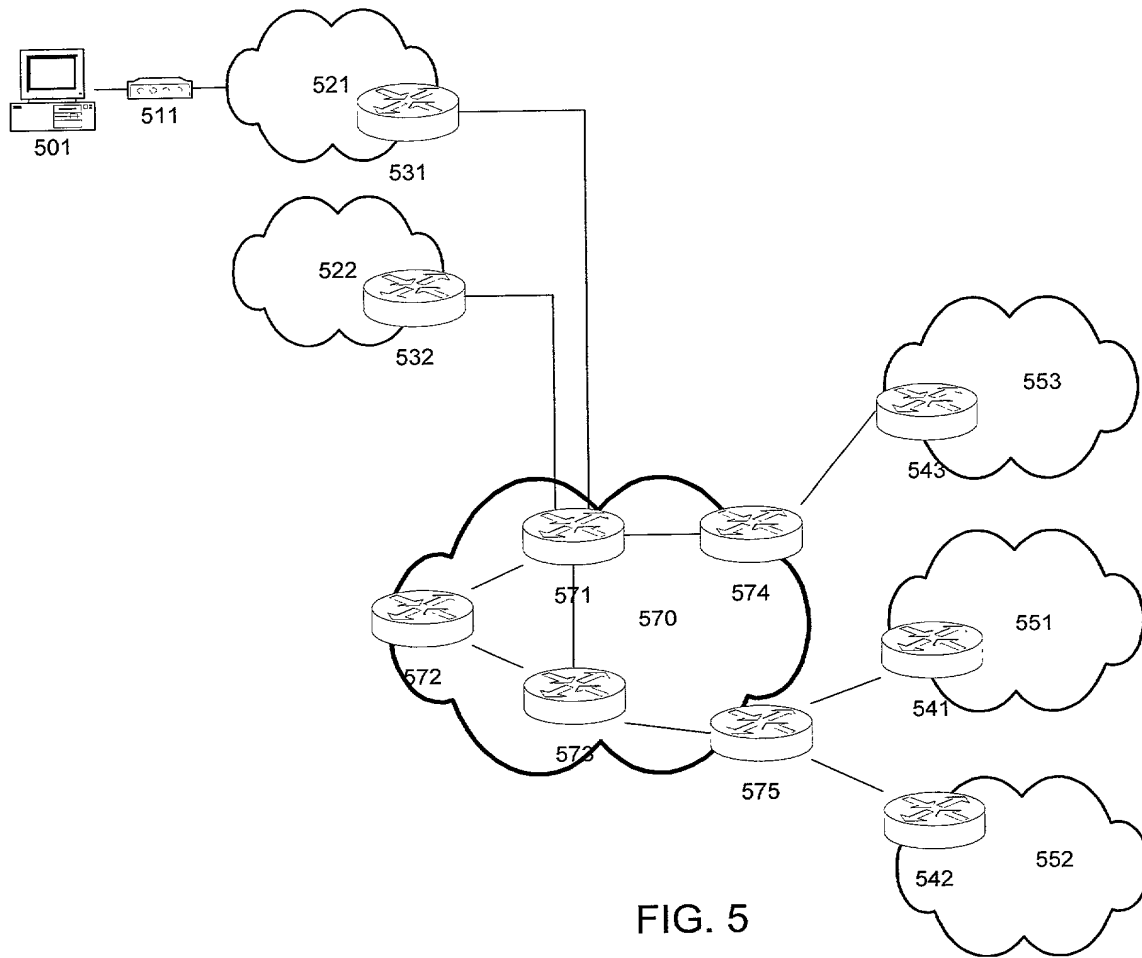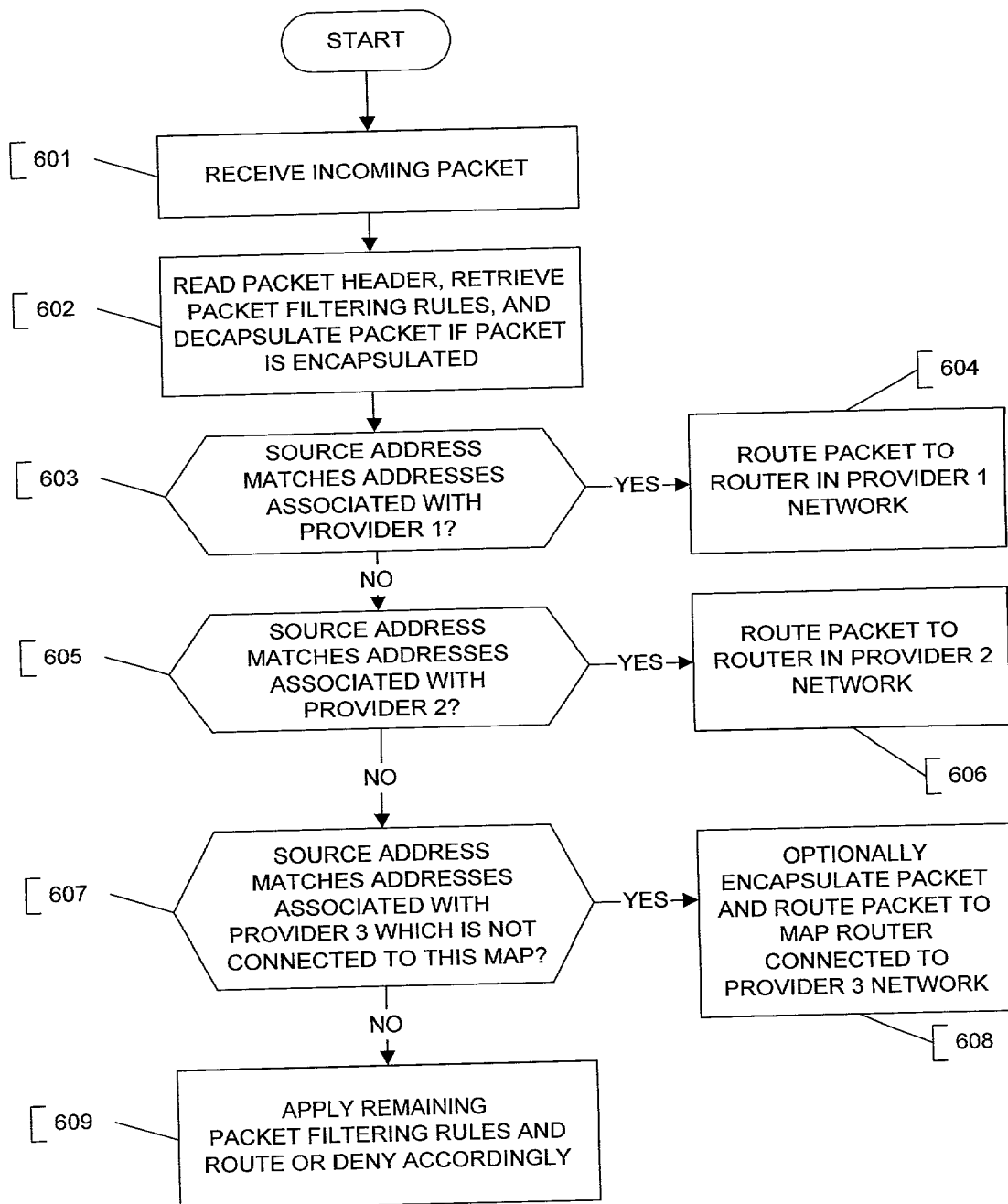
FIG. 4

501

511

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FIG. 5

START

RECEIVE INCOMING PACKET — 601

READ PACKET HEADER, RETRIEVE PACKET FILTERING RULES, AND DECAPSULATE PACKET IF PACKET IS ENCAPSULATED — 602

SOURCE ADDRESS MATCHES ADDRESSES ASSOCIATED WITH PROVIDER 1? — 603

YES → ROUTE PACKET TO ROUTER IN PROVIDER 1 NETWORK — 604

NO

SOURCE ADDRESS MATCHES ADDRESSES ASSOCIATED WITH PROVIDER 2? — 605

YES → ROUTE PACKET TO ROUTER IN PROVIDER 2 NETWORK — 606

NO

SOURCE ADDRESS MATCHES ADDRESSES ASSOCIATED WITH PROVIDER 3 WHICH IS NOT CONNECTED TO THIS MAP? — 607

YES → OPTIONALLY ENCAPSULATE PACKET AND ROUTE PACKET TO MAP ROUTER CONNECTED TO PROVIDER 3 NETWORK — 608

NO

APPLY REMAINING PACKET FILTERING RULES AND ROUTE OR DENY ACCORDINGLY — 609

FIG. 6